Require Improvements in the Quality of Gas Received from Producers

NaturalGas EPA POLLUTION PREVENTER

Partner Reported Opportunities (PROs) for Reducing Methane Emissions

PRO Fact Sheet No. 904

Applicable sector(s):

☐ Production ☐ Processing ■ Transmission and Distribution

Partners reporting this PRO: Columbia Gulf Transmission

Other related PROs: None

Compressors/Engines	☐
Dehydrators	☐
Pipelines	☐
Pneumatics/Controls	☐
Tanks	☐
Valves	☐
Wells	☐
Other	■

Technology/Practice Overview

Description

Low quality natural gas can lead to excessive filtration unit liquid recovery and transmission line cleanings at compressor stations. A partner has reported reducing methane and volatile organic compounds (VOC) emissions associated with these maintenance practices by requiring improvements in the quality of gas received from producers.

To enact a methane quality improvement, the operator obtained revised gas processing and compression agreements requiring reduced levels of gas contaminants such as particulates, water, and gas liquids. This limited the amount of emissions associated with the gas filtration system operation, in particular, methane emissions from gas liquids storage tanks.

Methane Savings: 500 Mcf per year

Costs

Capital Costs (including installation)

■ <$1,000 ☐ $1,000 – $10,000 ☐ >$10,000

Operating and Maintenance Costs (annual)

☐ <$100 ■ $100-$1,000 ☐ >$1,000

Payback (Years)

☐ 0–1 ☐ 1–3 ■ 3–10 ☐ >10

Benefits

Reducing methane emissions was an associated benefit of the project.

Operating Requirements

The implementation of this practice requires a new agreement between the gas producer and the transporter or enforcement of existing gas quality specifications.

Applicability

Any compressor facility directly receiving production gas and experiencing excessive liquids filtration, line pigging, or receiving natural gas of lower than desired quality may benefit from improving their gas quality specifications.

Methane Emissions Reductions

Methane emissions occur due to the venting of filtration liquid atmospheric storage tanks. One partner has reported methane reductions of more than 500 Mcf for 1 year.

Economic Analysis

Basis for Costs and Savings

A methane emissions reduction of 500 Mcf per year is based on partner reported savings in a 600-psig system.

Discussion

Facility maintenance costs and VOC emissions will be lower with reduced liquid loading on the filtration unit. Methane savings are significant, but not a primary justification.